

Tampa (28th); 68, Corpus Christi (17th). The lowest minima were: 33, Idaho Falls (11th); 34, Baker City (10th); 36, Lander (11th), Northfield (3d); 37, Sault Ste. Marie (2d), Roseburg (10th), Pysht and East Clallam (13th).

The years of highest maximum and lowest minimum temperatures are given in the last four columns of Table I of the current REVIEW. During the present month the maximum temperatures were the highest on record at: Yuma, 117; Walla Walla, 105; Palestine, 100; Roseburg, 98; Idaho Falls, 91; San Diego, 89; Port Angeles, 83. The minimum temperatures were the lowest on record at: Meridian, 58; Idaho Falls, 33.

The greatest daily range of temperature and data for computing the extreme and mean monthly ranges are given for each of the regular Weather Bureau stations in Table I. The largest values of the greatest daily ranges were: Miles City, 49; Lander, Pueblo, Idaho Falls, Port Crescent, Roseburg, and San Luis Obispo, 46; North Platte, Havre, and Winnemucca, 44. The smallest values were: Hatteras, 14; Key West and Tatoosh Island, 16; Jupiter and Galveston, 17; Kittyhawk, Point Reyes Light, and Eureka, 18; Block Island, 19; Wilmington, and Corpus Christi, 20. Among the extreme monthly ranges the largest were: Walla Walla and Roseburg, 61; San Luis Obispo, 60; Fresno, 59; Idaho Falls and Dodge City, 58; Miles City, 57; Spokane and Baker City, 56. The smallest values were: Galveston and Hatteras, 17; Key West, 18; Jupiter, 19; Eureka, 20; Port Eads, 21; Tatoosh Island, 23.

The accumulated monthly departures from normal temperatures from January 1 to the end of the current month are given in the second column of the following table, and the average departures are given in the third column for comparison with the departures of current conditions of vegetation from the normal condition.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Total.	Average.		Total.	Average.
Middle Atlantic.....	+ 2.3	+ 0.4	New England.....	- 1.2	- 0.2
South Atlantic.....	+ 8.1	+ 1.4	Florida Peninsula.....	- 9.7	- 1.6
West Gulf.....	+ 7.8	+ 1.3	East Gulf.....	- 1.2	- 0.2
Ohio Valley and Tenn.....	+ 9.5	+ 1.6	North Pacific.....	- 3.7	- 0.6
Lower Lake.....	+ 9.9	+ 1.6	Middle Pacific.....	- 0.8	- 0.1
Upper Lake.....	+ 20.5	+ 3.4			
North Dakota.....	+ 9.7	+ 1.6			
Upper Mississippi.....	+ 20.9	+ 3.5			
Missouri Valley.....	+ 20.3	+ 3.4			
Northern Slope.....	+ 10.0	+ 1.7			
Middle Slope.....	+ 22.2	+ 3.7			
Abilene (southern Slope).....	+ 22.0	+ 3.7			
Southern Plateau.....	+ 7.7	+ 1.3			
Middle Plateau.....	+ 2.1	+ 0.4			
Northern Slope.....	+ 12.6	+ 2.1			
South Pacific.....	+ 4.8	+ 0.8			

#### MOISTURE.

The quantity of moisture in the atmosphere at any time may be expressed by the weight of the vapor coexisting with the air contained in a cubic foot of space, or by the tension or pressure of the vapor, or by the temperature of the dew-point. The mean dew-points for each station of the Weather Bureau, as deduced from observations made at 8 a. m. and 8 p. m., daily, are given in Table I.

The rate of evaporation from a special surface of water on muslin at any moment determines the temperature of the wet-bulb thermometer, but a properly constructed evaporimeter may be made to give the quantity of water evaporated from a similar surface during any interval of time. Such an evaporimeter, therefore, would sum up or integrate the effects of those influences that determine the temperature as given by the wet bulb; from this quantity the average humidity of the air during any given interval of time may be deduced.

Measurements of evaporation within the thermometer shelters are difficult to make so as to be comparable at temperatures above and below freezing, and may be replaced by computations based on the wet-bulb temperatures. The absolute amount of evaporation from natural surfaces not protected from wind, rain, sunshine, and radiation, are being made at a few experimental stations and will be discussed in special contributions.

*Sensible temperatures.*—The sensation of temperature experienced by the human body and ordinarily attributed to the condition of the atmosphere depends not merely on the temperature of the air, but also on its dryness, on the velocity of the wind, and on the suddenness of atmospheric changes, all combined with the physiological condition of the observer. A complete expression for the relation between atmospheric conditions and nervous sensations has not yet been obtained.

#### PRECIPITATION.

[In inches and hundredths.]

The distribution of precipitation for the current month, as determined by reports from about 2,500 stations, is exhibited on Chart III. The numerical details are given in Tables I, II, and III. The total precipitation for the current month was heaviest in Florida and heavy in small areas within Missouri, Alabama, Louisiana, and the western part of North Carolina. It was least, viz, 0.00 in Central California and the adjacent portions of Nevada and Arizona.

The larger values at regular stations were: Tampa, 13.4; Pensacola, 12.5; Jacksonville, 9.4; Jupiter, 8.9; New Orleans, 8.2; Charleston and Meridian, 7.6; Mobile, 7.2.

The diurnal variation, as shown by tables of hourly means of the total precipitation, deduced from self-registering gauges kept at the regular stations of the Weather Bureau, is not now tabulated.

The current departures from the normal precipitation are given in Table I, which shows that precipitation was in excess at many stations on the Atlantic Coast as also generally in Florida, southern Georgia, Alabama, Mississippi, and western Louisiana. Elsewhere it was generally deficient. The large excesses were: Mobile, 7.1; Tampa, 6.5; Galveston, 4.5; Yarmouth, 4.4; Norfolk, 3.7; Detroit, 3.3; New York, 3.2. The large deficits were: Omaha, 3.8; Palestine, 3.5; Kansas City, 2.9; Fort Smith, 2.8; Des Moines, 2.7.

The average departure for each district is also given in Table I. By dividing these by the respective normals the following corresponding percentages are obtained (precipitation is in excess when the percentages of the normals exceed 100):

Above the normal: Middle Atlantic, 119; Florida, Peninsula, 144; east Gulf, 129; Lower Lake, 103.

Normal: Southern Plateau, 100.

Below the normal: New England, 97; south Atlantic, 92; west Gulf, 39; Ohio Valley and Tennessee, 83; upper Lake, 60; lower Lake, 76; upper Mississippi, 76; Missouri Valley, 71; northern Slope, 70; middle Slope, 84; southern Slope, (Abilene), 66; middle Plateau, 27; northern Plateau, 65; north Pacific, 85; middle Pacific, 20; south Pacific, 0.00.

The years of greatest and least precipitation for June are given in the REVIEW for June, 1890. The precipitation for the current month was the greatest on record at: Vineyard Haven, 3.59; Meridian, 7.55; Tampa, 13.42. It was the least on record at Northfield, 1.62; Nashville, 1.82; Palestine, 0.71; Pueblo, 0.35.

The total accumulated monthly departures from normal precipitation from January 1 to the end of the current month are given in the second column of the following table; the third column gives the ratio of the current accumulated precipitation to its normal value.